OBSERVATIONS AT RIVAS, NICARAGUA.

The records contributed for many years by Dr. Earl Flint, at Rivas, Nicaragua, include barometric readings. His present station is at 11° 26′ N., 85° 47′ W. The observations at 7:17 a. m., local time, are simultaneous with Greenwich 1 p. m. The altitude of the barometer is now said to be 4 feet above ground; the thermometer 6 feet above ground; the rain gage 7 feet above ground. The ground is 210 feet above sea level. Until the barometer has been compared with a standard it seems hardly necessary to publish the daily readings. The wind force is recorded on the Beaufort scale, 0–12. When cloudiness is less than $\frac{1}{10}$, the letter "F," or "Few," is recorded.

Simultaneous observations at 1 p. m. Greenwich (or 7:17 a. m. local) time December, 1899.

Date.	Temperature.		Wind.		Upper clouds.			Lower clouds.		
	Air.	Dew-point.	Direction.	Force.	Kind.	Amount.	Direction from.	Kind.	Amount.	Direction from.
	°	°								
1	73	72	se.	0	cs.	5	se.	k.	few.	se.
2	74	72	ne.	0				k.	10	ne.
3	75	74	e.	3				k, k.*	0	e.
4	75.5	70	ne.	3				ak.	1	ne.
5	74.5	67	ne.	7				ks.	5	ne.
6	75	71	ne.	4				fk.	2	ne.
7	78	74	ne.	3				fk.	10	ne.
8	78	74	e.	3	cs.	10	ne.	k, k.*	few.	e.
9	77.5	74	se.	3				ak, ks.	1, 9	se.
10	77	74	se.	0	cs.	3		k.	7	se.
11	75.5	70	ne.	3				k.	10	ne.
12	77	73	ne.	4	cs.	4	sw.	k.	1	ne.
13	78	74	se.	2				k.	10	se.
14	78	74	ne.	4	cs.	2	se.	k.	3	ne.
15	77	73	ne.	6	cs.	1	sw.	k, k.*		ne.
16	76	72	ne.	6	cs.	Few.	se.	ak, k.	1	sw.
17	76	73	se.	5				fk.	8	se.
18	76.5	71	se.	6				fk.	few.	se.
19	76	70	se.	7				ak, ks.	2, 8	se.
20	76	70	se.	7				ak, fk.	7	se.
21	75	69	ne.	5				k.	few.	ne.
22	73.5	68	ne.	4				k, k.*	0	ne.
23	73	68	ne.	3				ks.	few.	ne.
24	74	69	ne.	3				k, k.*	0	ne.
25	74.5	67	ne.	3				k.	few.	ne.
26	74	67	se.	3				k.	8	se.
27	74	67	s.	6				fk.	7	e.
28	77.5	71	se.	4				fk.	8	se.
29	76	70	ne.	4				fk.	5	ne.
30	75.5	67	e.	6	cs.	Few.	s.	fk.	6	e.
31	76.5	70	ne.	4				k.	7	ne.
Means	75.7									
Departure	−1.18									

*On Ometepe.

This station is situated on the western shore of Lake Nicaragua, not far from the eastern end of the western division of the proposed Nicaragua Canal. The volcano Ometepe, on an island in Lake Nicaragua, is about 10 miles northeast of the station. Dr. Flint's records occasionally mention the presence of clouds on the summit of this mountain.

Dr. Flint's reports to the Weather Bureau now embrace two distinct features, namely, the simultaneous morning observations and the daily climatological summary, as given in the two accompanying tables for each month.

Climatological observations for twenty-four hours ending at 7:17 a. m. local (or 1 p. m. Greenwich) time, December, 1899.

Date.	Temperature.		Wind.		Average cloudiness.	Total rainfall.	Rainfall at Sapoa.
	Maximum.	Minimum.	Prevailing direction.	Maximum force.			
	°	°				*Inches.*	*Ins.*
1	80	72.5	sw, ne.	3	7	0.06	0.05
2	81	70	sw.	2	5	0.04	0.42
3	81	73	ne.	5	3	0.00	0.01
4	82	74	e.	4	Few.	0.00	0.07
5	84	75	ne.	6	5	0.00	0.00
6	84.2	74	ne.	7	6	0.00	0.00
7	85.5	74	ne.	7	6	0.00	0.19
8	85	78	ne.	5	4	0.00	0.02
9	85.5	77	e-ne.	5	6	0.02	0.49
10	86	76.5	se.	4	6	0.04	0.08
11	85	77	se.	2	7	0.24	0.02
12	82	75	ne.	4	10	0.00	0.01
13	86.5	76	ne, e.	4	3	0.00	0.04
14	86	77	ese.	3	9	0.02	0.01
15	84.5	77	ne.	4	7	0.00	0.04
16	83	76	ne.	6	2	0.01	0.80
17	86	75	ne.	6	3	0.00	0.00
18	83	75.5	se.	6	7	0.00	0.05
19	84	76	se.	7	5	0.20	0.34
20	82.2	75	se.	7	6	0.00	0.41
21	82.4	75	ese.	7	2	0.00	0.08
22	83	74.2	e-ne.	5	2	0.06	0.01
23	83	73	ne.	4	2	0.13	0.00
24	82.5	73	ne.	4	3	0.00	0.00
25	84.1	73.5	ne.	3	1	0.00	0.00
26	83.8	74	ne.	5	1	0.00	0.00
27	82	74	ese.	7	7	0.00	0.02
28	83	74	e.	6	5	0.00	0.00
29	84	76	se.	5	5	0.00	0.08
30	86.3	75	ne.	5	3	T.	0.04
31	85.5	75	e.	6	2	0.00	0.00
Sums						0.82	1.98
Means	83 7	74.8		5	4.5		
Departures						−0.43	

NOTE.—Mr. Flint gives the total rainfall at Sardinas for December 1 to 22, inclusive, as 1.70. The total annual rainfall for 1899 at Rivas is 65,86, and at Granada 60,32. On the 21st, at 5:30 p. m., a seismic movement north and south shook the doors for three seconds.

NOTES BY THE EDITOR.

HISTORY OF THE BAROMETER.

On page 468 of Ciel et Terre for December, 1899, Mr. Lancaster reprints from the Bulletin of the Belgian Academy a recently discovered, and almost unknown letter, written by Descartes, together with a note added by the well-known historian G. Monchamp, a member of the Royal Academy of Belgium. We translate the whole, as follows:

LETTER FROM DESCARTES TO FATHER MERSENNE.

EGMOND, *December* 13, 1647.

It is now some time since M. de Zuglichen sent me the little work of M. Pascal entitled "Nouvelles, etc." "New experiments relative to the vacuum," for which I have to thank the author, since it was really sent to me by him. He seems there to wish to combat my idea of a subtile form of matter, and I am very much obliged to him. But I pray him not to forget to put forward his best arguments on this subject, and not to think hardly of me if, at the proper time and place, I explain all that I judge necessary for my defense. You ask me for some account of the experiments with quicksilver, and nevertheless you do not tell me what they are, but seem to think that I ought to divine. But I ought not to take any chances in this, because if I hit upon the truth one might think that I had already tested it by experiment, and if I make a mistake one might form a less favorable opinion of me. But if you will tell me frankly all that you have observed, I shall be under many obligations to you, and in case that I make use of this information I shall not forget to whom the credit is due. I had already requested Pascal to determine, by experiment, whether the mercury rises as high when on top of a mountain as when at the bottom. I do not know whether he has made the experiment, but in order that we may find out whether the changes of weather and location have any effect, I send you a strip of paper two and a half feet long on which the third and fourth inches above the 2-foot mark are divided into lines. I will retain another similar piece here, so that we shall be able to see whether our observations accord one with the other. I, therefore, pray you to observe, both in cold and in warm weather, and when the wind blows from the north and from the south, to what division on this scale the quicksilver rises. In order that you may know whether you find any difference and that you may be induced to send me your observations freely, I must tell you that on Monday last the mercury attained the height of exactly 2 feet and 3 inches on this measuring scale, and that yesterday, which was Thurs-